CSE120: A New Course…

Computer Science Principles

Lawrence Snyder
University of Washington, Seattle
Instructor: Larry Snyder, Prof. Emeritus
- I like travel; I’ve lived in > ½ dozen other countries; a favorite food is anchovies + potato chips

Teaching Assistant: Brandon Blakeley, grad student

Teaching Collaborator: Susan Evans, high school teacher; she’ll introduce herself Friday

... and you?
Announcements

- Announcements are usually listed here ... they are also given at the top of the class Web page; they are not usually archived here
A new course developed to be an AP course
- Supported by NSF and College Board
  - We will have pre- and post-surveys
  - Course offered under a microscope – lots of discussion of the “course,” as opposed to the “content” ... the sponsors want YOUR opinion
  - It’s exciting – you learn the material first
    - Lots of effort (and big staff) to help you get it
    - Need to be flexible
    - I’ve done this one other time ...
How did it happen?

- Started two years ago … “heavy weights” defined the content; now we try it out
- Five schools are pilots this year
  - UW, UC Berkeley, UC San Diego, Metropolitan State College of Denver, UNC at Charlotte
  - Next year, pilots move to high school, plus there will be more college pilots
  - In a few years (2014) there will be a standard AP high school course and an AP exam

... and it all started here!
How I’m Approaching This Course

- I see the task of this course as teaching
  - Computational Principles – “bits can represent all information” – that everyone should know
  - Computational Thinking – how to solve (your) problems with computers that you can use

- If you were thinking this class will be ...
  - Trivial, forget it: I teach stuff you haven’t had before
  - Difficult, forget it: This will eventually be a high school class
  - Fun and interesting: Perfect ... that’s what it will be
A Brief Word About Programming

- Some people panic at the mention of the word *programming* ... as if saying it would cause them to become social outcasts, nerdy, ...
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- Some people panic at the mention of the word *programming* ... as if saying it would cause them to become social outcasts, nerdy, ...
- Programming’s a career; it takes years to learn; it pays really well; normal people do it, too
- I teach some programming in this class as part of teaching computational thinking
  - You won’t be a programmer at the end
  - You will still be however normal as you are today
  - You will, I hope, also think differently as a result
Class Structure

- 3 lectures – I will talk, demo and we’ll all discuss various topics
- 2 labs – practice with the TA present
- Homework – exercises that help push the material further ... one hour a day as needed

In computing, there are lots and lots of detailed facts that no one ever remembers, so computing people are always looking up information so they don’t have to learn it; we’ll do that, too, esp. in homework

- One 2-week project, Midterm, Final
- Fridays “After Image Survey” ... points for helping with the experiment
Expectations ... yours of me

- Academically, you can expect me to ...
  - Select most important topics for the curriculum
  - Present the material in the clearest possible way
  - Select exercises and lab assignments that
    - Further your education in this class
    - Are interesting and enjoyable
    - Appreciate that you have other things in your life
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- Personally, you can expect me to be ...
  - Respectful, cooperative, understanding, ...
  - Encouraging, accepting of your contributions, ...
  - Provide help, both online and 1-on-1
Expectations ... mine for you

- Academically, I expect you ...
  - To come to class & labs ready to learn CS Principles
  - To make a sincere effort to understand the material
  - Go online to work on this class each day ...
    - Submit work that you alone created, except team asmts
    - Make constructive comments about improving this class
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- Personally, I expect you to
  - Be respectful of me and the other students
  - Contribute to helping others on discussion board
  - Meet deadlines; ask for extensions in extreme need
Announcements

- What you need to do today
  - “Sign up” for this class – that’s tech lingo for committing yourself to make your part of this work
  - Familiarize yourself with the class Web page at http://www.cs.washington.edu/cse120 including ...

  - The location of announcements, assignments, etc.
  - The Academic Conduct guidelines
  - Read “Why to take this class”

- Take the Pre-survey, linked from the Web page
Calendar ...

**CSE120 Computer Science Principles**

**Calendar**

All of the scheduling information -- days off, assignments, due dates, reading links, etc. -- are presented on this page. Notice that some links are present, but not populated with a file yet.

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### Calendar

All Assignments are due before class on the day shown.

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Assignment</th>
<th>Due Today</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 3</td>
<td>Lec: Introduction, Orientation, The Plan</td>
<td>Slides</td>
<td>Assignment 1</td>
</tr>
<tr>
<td>Jan 4</td>
<td>Lab: &quot;What I value&quot; writing exercise; FTP</td>
<td></td>
<td>Lab 1</td>
</tr>
<tr>
<td>Jan 5</td>
<td>Lec: Lightbot 2.0 - A Game or Programming? Slides</td>
<td>Assignment 2</td>
<td>Assignment 1 Report</td>
</tr>
<tr>
<td>Jan 6</td>
<td>Lab: Review FTP; Lightbot Symbolic Form</td>
<td>Lab 2 mycsp</td>
<td>Small Photo of Yourself</td>
</tr>
</tbody>
</table>
Assignment 1: Lightbot 2.0

- Lightbot shows up on many gaming sites but whether or not it’s a “game” is a topic for Wed
  - You direct a robot around a “blocks world”
  - It’s pretty easy, and I hope it’s fun … there is a purpose to doing it